

~~10/088596~~

JC10 Rec'd PCT/PTO 21 MAR 2002

PATENT  
0514-1003-1

**IN THE U.S. PATENT AND TRADEMARK OFFICE**

In re application of: Jairo FALLA et al.

Appl. No.:	<b>NEW</b>	Group:
Filed:	March 21, 2002	Examiner:
For:	BACTERIAL COMPOSITION, PROCESS AND APPARATUS FOR THE PRE-TREATMENT OF EFFLUENTS LOADED WITH FATTY ORGANIC MATTER	

**PRELIMINARY AMENDMENT**

Assistant Commissioner for Patents  
Washington, DC 20231

March 21, 2002

Sir:

The following preliminary amendments and remarks are respectfully submitted in connection with the above-identified application.

**IN THE CLAIMS:**

Please amend the claims as follows:

--4. (Amended) Use of a bacterial composition according to claim 1 for the treatment or pre-treatment of effluent rich in organic fats, particularly effluent from the food or agro-food industry.

5. (Amended) Process for the pre-treatment of effluent rich in organic fats, particularly effluent from the food or agro-food industry, characterised in that it consists of pre-treating directly said effluent containing said fats as it leaves the place of its production and in that it consists of accomplishing the following stages:

- supplying a homogenisation and/or processing vessel (1) with effluent to be pre-treated, as it is produced and activating a recirculation circuit (2) between the vessel and a biological reactor (3) so as to obtain in said biological reactor (3) a dilution rate of the fats inversely proportional to the fat concentration initially present in the effluent to be pre-treated and situated between  $0.400 \text{ h}^{-1}$  and  $1.500 \text{ h}^{-1}$  for a fat concentration contained in said effluent to be pre-treated entering the homogenisation and/or processing vessel (1) of 1 g/l,

- degrading said fats in said biological reactor (3) using a bacterial composition according to claim 1, and

- discharging the pre-treated effluent, now containing practically no fats, to a final treatment unit such as a purification plant.

7. (Amended) Process according to claim 5, characterised in that the fat concentration of the effluent to be pre-treated entering the homogenisation and/or processing vessel (1) is less than 40 g/l, and preferably situated between 0.5 g/l and 10 g/l.

8. (Amended) Process according to claim 5, characterised in that the arrival in the homogenisation and/or processing vessel (1) of the recirculation water discharged by the recirculation circuit (2) is effected from above by a spraying device (4).

9. (Amended) Process according to claim 5 characterised in that the pre-treated effluent is discharged using a decanter (5) on the upper part of which a floating pump (6) is provided for the elimination of surface floating sludge that cannot be decanted.

11. (Amended) Facility for the pre-treatment of effluent rich in organic fat, characterised in that it consists principally of at least one homogenisation and/or processing vessel (1), at least one biological reactor (3) of a capacity suited to the daily output of effluent to be pre-treated and to the fat concentration of that effluent, said biological reactor (3) being connected to the homogenisation and/or processing vessel(s) (1) by a recirculation circuit (2), at least one device for providing a controlled supply of oxygen (7) arranged in the

biological reactor(s) (3) and at least one means of discharging the pre-treated effluent, for example by overflow, outside said biological reactor(s) (3).--

## REMARKS

Claims 1-11 are pending in the present application.

Entry of the above amendments is earnestly solicited.

Should there be any matters that need to be resolved in

Attached hereto is a marked-up version of the changes

The Commissioner is hereby authorized in this,

Respectfully submitted,

YOUNG & THOMPSON

YOUNG & THOMPSON

*Thomas W. Perkins*

---

Thomas W. Perkins, Reg. No. 3

745 South 23<sup>rd</sup> Street  
Arlington, VA 22202  
Telephone (703) 521-2297

TWP/bam  
Attachments

531 Rec'd PCT/PTC 21 MAR 2002

VERSION WITH MARKINGS TO SHOW CHANGES MADEIN THE CLAIMS:

The claims have been amended as follows:

4. (Amended) Use of a bacterial composition according to ~~any one of claims 1 to 3~~ claim 1 for the treatment or pre-treatment of effluent rich in organic fats, particularly effluent from the food or agro-food industry.

5. (Amended) Process for the pre-treatment of effluent rich in organic fats, particularly effluent from the food or agro-food industry, characterised in that it consists of pre-treating directly said effluent containing said fats as it leaves the place of its production and in that it consists of accomplishing the following stages:

- supplying a homogenisation and/or processing vessel (1) with effluent to be pre-treated, as it is produced and activating a recirculation circuit (2) between the vessel and a biological reactor (3) so as to obtain in said biological reactor (3) a dilution rate of the fats inversely proportional to the fat concentration initially present in the effluent to be pre-treated and situated between  $0.400 \text{ h}^{-1}$  and  $1.500 \text{ h}^{-1}$  for a fat concentration contained in said effluent to be pre-treated entering the homogenisation and/or processing vessel (1) of 1 g/l,

- degrading said fats in said biological reactor (3) using a bacterial composition according to ~~any one of claims 1 to 3~~ claim 1, and

- discharging the pre-treated effluent, now containing practically no fats, to a final treatment unit such as a purification plant.

7. (Amended) Process according to ~~any one of claims 5 or 6,~~ claim 5, characterised in that the fat concentration of the effluent to be pre-treated entering the homogenisation and/or processing vessel (1) is less than 40 g/l, and preferably situated between 0.5 g/l and 10 g/l.

8. (Amended) Process according to ~~any one of claims 5 to 7,~~ claim 5, characterised in that the arrival in the homogenisation and/or processing vessel (1) of the recirculation water discharged by the recirculation circuit (2) is effected from above by a spraying device (4).

9. (Amended) Process according to ~~any one of claims 5 to 8,~~ claim 5 characterised in that the pre-treated effluent is discharged using a decanter (5) on the upper part of which a floating pump (6) is provided for the elimination of surface floating sludge that cannot be decanted.

11. (Amended) Facility for the pre-treatment of effluent rich in organic fats, ~~in particular for the implementation of the process according to any one of claims 5 to 10,~~ characterised in that it consists principally of at least one homogenisation and/or processing vessel (1), at least one biological reactor (3) of a capacity suited to the daily output of effluent to be pre-treated and to the fat concentration of that effluent, said biological reactor (3) being connected to the homogenisation and/or processing vessel(s) (1) by a recirculation circuit (2), at least one device for providing a controlled supply of oxygen (7) arranged in the biological reactor(s) (3) and at least one means of discharging the pre-treated effluent, for example by overflow, outside said biological reactor(s) (3).